

What Is Claimed Is:

1. A method for the production of an improved raffinose-resistant, amino acid producing bacterial strain B comprising:

- (a) subjecting a parental bacterial strain A to mutagenesis;
- (b) contacting said mutagenized parental strain A with a medium containing at least about 1% raffinose based on ammonia sulfate content;
- (c) selecting a raffinose-resistant bacterial strain B; and
- (d) determining amino acid production of said raffinose-resistant bacterial strain B.

2. The method of Claim 1, wherein said parental bacterial strain is subjected to random chemical mutagenesis.

3. The method of Claim 1, wherein said parental bacterial strain is selected from a group consisting of:

- (a) *Corynebacterium sp.*;
- (b) *Brevibacterium sp.*;
- (c) *Escherichia coli*; and
- (d) *Bacillus sp.*

4. The method of Claim 1, wherein said bacterial strain B produces an amino acid selected from the group consisting of:

- (a) glycine;
- (b) alanine;
- (c) methionine;
- (d) phenylalanine;
- (e) tryptophan;
- (f) proline;
- (g) serine;

- (h) threonine;
- (i) cysteine;
- (j) tyrosine;
- (k) asparagine;
- (l) glutamine;
- (m) aspartic acid;
- (n) glutamic acid;
- (o) lysine;
- (p) arginine;
- (q) histidine;
- (r) isoleucine;
- (s) leucine; and
- (t) valine.

5

Sub B

10

5. The method of Claim 1, wherein said parental bacterial strain is *Corynebacterium* sp. producing L-Lysine.

15

6. A bacterial strain B that produces an amino acid produced by a process wherein:

- (a) a parental bacterial strain A is subjected to mutagenesis;
- (b) the mutagenized parental strain is contacted with a medium containing at least about 1% raffinate based on ammonia sulfate content;
- (c) raffinate-resistant bacterial strain B is selected from said mutagenized parental strain; and
- (d) amino acid production of said bacterial strain B is determined.

20

Sub A

medium

7. The bacterial strain of Claim 6, wherein the parental bacterial strain A is selected from a group consisting of the following:

- (a) *Corynebacterium sp.*;
- (b) *Brevibacterium sp.*;
- (c) *Escherichia coli*; and
- (d) *Bacillus sp.*

8. The bacterial strain of Claim 7, wherein said bacterial strain B produces an amino acid selected from the group consisting of:

- (a) glycine;
- (b) alanine;
- (c) methionine;
- (d) phenylalanine;
- (e) tryptophan;
- (f) proline;
- (g) serine;
- (h) threonine;
- (i) cysteine;
- (j) tyrosine;
- (k) asparagine;
- (l) glutamine;
- (m) aspartic acid;
- (n) glutamic acid;
- (o) lysine;
- (p) arginine;
- (q) histidine;
- (r) isoleucine;
- (s) leucine; and
- (t) valine.

Sub B

Subt A2
9. ~~A *Corynebacterium* sp. strain producing at least about 10 g/l L-lysine in 24 hours when grown in a medium containing at least about 1% raffinose.~~

Sub B1
10. A *Brevibacterium* strain producing at least about 10 g/l L-lysine in 24 hours when grown in a medium containing at least about 1% raffinose.

Subt A3
11. An L-lysine producing bacterial strain, wherein said strain is selected from the group consisting of:

- (a) NRRL B-30059;
- (b) NRRL B-30060;
- (c) NRRL B-30061;
- (d) NRRL B30062;
- (e) NRRL B-30063; and
- (f) mutants of (a), (b), (c), (d) or (e).

12. The strain of claim 11, wherein said strain is NRRL B-30059.

13. The strain of claim 11, wherein said strain is NRRL B-30060.

14. The strain of claim 11, wherein said strain is NRRL B-30061.

15. The strain of claim 11, wherein said strain is NRRL B-30062.

16. The strain of claim 11, wherein said strain is NRRL B-30063.

what-
brevibacterium?
Brevi of
com

17. A process for the production of an amino acid comprising:

(a) culturing a bacterium B in a medium containing raffinose, whereby said strain is obtained by the following method:

(i) selecting a parental bacterial strain A that produces an amino acid;

(ii) subjecting said parental strain to mutagenesis;

(iii) selecting from said mutagenized parental strain, an improved raffinose-resistant bacterial strain B; and

(b) recovering the amino acid from the culture media.

18. The process of claim 17, wherein the media concentration of raffinose is at least about 1% based on ammonia sulfate content.

19. The process of claim 17, wherein the amount of L-lysine produced is at least about 10 g/l L-lysine in 24 hours.

20. The process of claim 17, wherein the medium concentration of raffinose is at least about 1% based on ammonia sulfate content and the amount of L-lysine produced is at least about 10 g/l L-lysine in 24 hours.

21. The process of claim 17, wherein the raffinose concentration is about 5% based on ammonia sulfate content and the amount of L-lysine produced is at least about 10 g/l L-lysine in 24 hours.

22. The process of claim 17, wherein bacterium B is selected from the group consisting of:

(a) *Corynebacterium* sp.;

(b) *Brevibacterium* sp.;

(c) *Escherichia coli*; and

(d) *Bacillus* sp..

Sub B

- (a) NRRL B-30059;
(b) NRRL B-30060;
(c) NRRL B-30061;
(d) NRRL B-30062; and
(e) NRRL B-30063; and
(f) mutants of (a), (b), (c), (d) or (e).